



**Avaya Integrated Management
Release 2.1
Enhanced Converged Management
Installation and Upgrade**

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Notice

Every effort was made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

Warranty

Avaya Inc. provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language as well as information regarding support for this product, while under warranty, is available through the following Web site: <http://www.avaya.com/support>.

Preventing Toll Fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Fraud Intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, in the United States and Canada, call the Technical Service Center's Toll Fraud Intervention Hotline at 1-800-643-2353.

How to Get Help

For additional support telephone numbers, go to the Avaya support Web site: <http://www.avaya.com/support>. If you are:

- Within the United States, click the *Escalation Management* link. Then click the appropriate link for the type of support you need.
- Outside the United States, click the *Escalation Management* link. Then click the *International Services* link that includes telephone numbers for the international Centers of Excellence.

Providing Telecommunications Security

Telecommunications security (of voice, data, and/or video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Utilization (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including but not limited to, human/data privacy, intellectual property, material assets, financial resources, labor costs, and/or legal costs).

Responsibility for Your Company's Telecommunications Security

The final responsibility for securing both this system and its networked equipment rests with you - Avaya's customer system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources including but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products

TCP/IP Facilities

Customers may experience differences in product performance, reliability and security depending upon network configurations/design and topologies, even when the product performs as warranted.

Standards Compliance

Avaya Inc. is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Avaya Inc. The correction of interference caused by such unauthorized modifications, substitution or attachment will be the responsibility of the user. Pursuant to Part 15 of the Federal Communications Commission (FCC) Rules, the user is cautioned that changes or modifications not expressly approved by Avaya Inc. could void the user's authority to operate this equipment.

Product Safety Standards

This product complies with and conforms to the following international Product Safety standards as applicable:

Safety of Information Technology Equipment, IEC 60950, 3rd Edition including all relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE) CB-96A.

Safety of Information Technology Equipment, CAN/CSA-C22.2 No. 60950-00 / UL 60950, 3rd Edition

Safety Requirements for Customer Equipment, ACA Technical Standard (TS) 001 - 1997

One or more of the following Mexican national standards, as applicable: NOM 001 SCFI 1993, NOM SCFI 016 1993, NOM 019 SCFI 1998

The equipment described in this document may contain Class 1 LASER Device(s). These devices comply with the following standards:

- EN 60825-1, Edition 1.1, 1998-01
- 21 CFR 1040.10 and CFR 1040.11.

The LASER devices operate within the following parameters:

- Maximum power output: -5 dBm to -8 dBm
- Center Wavelength: 1310 nm to 1360 nm

Luokan 1 Laserlaite

Klass 1 Laser Apparat

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposures. Contact your Avaya representative for more laser product information.

Electromagnetic Compatibility (EMC) Standards

This product complies with and conforms to the following international EMC standards and all relevant national deviations:

Limits and Methods of Measurement of Radio Interference of Information Technology Equipment, CISPR 22:1997 and EN55022:1998.

Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement, CISPR 24:1997 and EN55024:1998, including:

- Electrostatic Discharge (ESD) IEC 61000-4-2
- Radiated Immunity IEC 61000-4-3
- Electrical Fast Transient IEC 61000-4-4
- Lightning Effects IEC 61000-4-5
- Conducted Immunity IEC 61000-4-6
- Mains Frequency Magnetic Field IEC 61000-4-8
- Voltage Dips and Variations IEC 61000-4-11
- Powerline Harmonics IEC 61000-3-2
- Voltage Fluctuations and Flicker IEC 61000-3-3

Federal Communications Commission Statement

Part 15:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Part 68: Answer-Supervision Signaling

Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 rules. This equipment returns answer-supervision signals to the public switched network when:

- answered by the called station,
- answered by the attendant, or
- routed to a recorded announcement that can be administered by the customer premises equipment (CPE) user.

This equipment returns answer-supervision signals on all direct inward dialed (DID) calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.

Avaya attests that this registered equipment is capable of providing users access to interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialing codes is a violation of the Telephone Operator Consumers Act of 1990.

REN Number

For MCC1, SCC1, CMC1, G600, and G650 Media Gateways:

This equipment complies with Part 68 of the FCC rules. On either the rear or inside the front cover of this equipment is a label that contains, among other information, the FCC registration number, and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

For G350 and G700 Media Gateways:

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. The digits represented by ## are the ringer equivalence number (REN) without a decimal point (for example, 03 is a REN of 0.3). If requested, this number must be provided to the telephone company.

For all media gateways:

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed 5.0. To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

REN is not required for some types of analog or digital facilities.

Means of Connection

Connection of this equipment to the telephone network is shown in the following tables.

For MCC1, SCC1, CMC1, G600, and G650 Media Gateways:

Manufacturer's Port Identifier	FIC Code	SOC/REN/A.S. Code	Network Jacks
Off premises station	OL13C	9.0F	RJ2GX, RJ21X, RJ11C
DID trunk	02RV2-T	0.0B	RJ2GX, RJ21X
CO trunk	02GS2	0.3A	RJ21X
	02LS2	0.3A	RJ21X
Tie trunk	TL31M	9.0F	RJ2GX
Basic Rate Interface	02IS5	6.0F, 6.0Y	RJ49C
1.544 digital interface	04DU9-BN	6.0F	RJ48C, RJ48M
	04DU9-IKN	6.0F	RJ48C, RJ48M
	04DU9-ISN	6.0F	RJ48C, RJ48M
120A4 channel service unit	04DU9-DN	6.0Y	RJ48C

For G350 and G700 Media Gateways:

Manufacturer's Port Identifier	FIC Code	SOC/REN/A.S. Code	Network Jacks
Ground Start CO trunk	02GS2	1.0A	RJ11C
DID trunk	02RV2-T	AS.0	RJ11C
Loop Start CO trunk	02LS2	0.5A	RJ11C
1.544 digital interface	04DU9-BN	6.0Y	RJ48C
	04DU9-DN	6.0Y	RJ48C
	04DU9-IKN	6.0Y	RJ48C
	04DU9-ISN	6.0Y	RJ48C
Basic Rate Interface	02IS5	6.0F	RJ49C

For all media gateways:

If the terminal equipment (for example, the media server or media gateway) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact the Technical Service Center at 1-800-242- 2121 or contact your local Avaya representative. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. It is recommended that repairs be performed by Avaya certified technicians.

The equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

This equipment, if it uses a telephone receiver, is hearing aid compatible.

Canadian Department of Communications (DOC) Interference Information

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

Declarations of Conformity

United States FCC Part 68 Supplier's Declaration of Conformity (SDoC)

Avaya Inc. in the United States of America hereby certifies that the equipment described in this document and bearing a TIA TSB-168 label identification number complies with the FCC's Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal Attachments (ACTA) adopted technical criteria.

Avaya further asserts that Avaya handset-equipped terminal equipment described in this document complies with Paragraph 68.316 of the FCC Rules and Regulations defining Hearing Aid Compatibility and is deemed compatible with hearing aids.

Copies of SDOCs signed by the Responsible Party in the U. S. can be obtained by contacting your local sales representative and are available on the following Web site: <http://www.avaya.com/support>.

All Avaya media servers and media gateways are compliant with FCC Part 68, but many have been registered with the FCC before the SDoC process was available. A list of all Avaya registered products may be found at: <http://www.part68.org> by conducting a search using "Avaya" as manufacturer.

European Union Declarations of Conformity



Avaya Inc. declares that the equipment specified in this document bearing the "CE" (*Conformité Européenne*) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC). This equipment has been certified to meet CTR3 Basic Rate Interface (BRI) and CTR4 Primary Rate Interface (PRI) and subsets thereof in CTR12 and CTR13, as applicable.

Copies of these Declarations of Conformity (DoCs) can be obtained by contacting your local sales representative and are available on the following Web site: <http://www.avaya.com/support>.

Japan

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

To order copies of this and other documents:

Call: Avaya Publications Center
Voice 1.800.457.1235 or 1.207.866.6701
FAX 1.800.457.1764 or 1.207.626.7269

Write: Globalware Solutions
200 Ward Hill Avenue
Haverhill, MA 01835 USA
Attention: Avaya Account Management

E-mail: totalware@gwsmail.com

For the most current versions of documentation, go to the Avaya support Web site: <http://www.avaya.com/support>.

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1 Introduction

Purpose

The purpose of this book is to provide the following information:

- Hardware and software requirements for Microsoft® Windows® servers and Windows client PCs.
- Pre-installation tasks that must be completed prior to installation.
- Procedures to install the products in the Integrated Management Enhanced Converged Management offer. If any of the products included in this offer is already installed on your system, those products will be upgraded during this installation.

Prerequisites

System administrators who install the Integrated Management Enhanced Converged Management software should be experienced in installing software on Windows operating systems in a converged network environment.

Intended Audience

This book is written for system administrators who are responsible for installing software on Windows servers.

Conventions Used in This Book

The following typographical conventions are used:

- **Bold** type is used to indicate information that you type, buttons in a window, and the **Enter** key on the keyboard. It is also used for emphasis.
- `Courier` font is used for any information that the computer screen displays.
- Arrows indicate options that you select from cascading menus; for example, “Select File > Open” means choose the “Open” option from the “File” menu.

Support Resources

Avaya provides a variety of planning, consulting, and technical services. The following sections describe the resources and services that are available.

Avaya Technology and Consulting (ATAC)

Avaya Technology and Consulting (ATAC) works with client teams to develop detailed solutions for connectivity to Avaya Communication Manager solutions. The ATAC also designs network configurations.

Avaya Remote Network Integration Services (RNIS)

Avaya Remote Network Integration Services (RNIS) offers customers the following services:

- Platform readiness verification
- Remote implementation and installation
- Network management server configuration
- Customer acceptance verification
- Custom on-site services

The RNIS provides support on a contract basis. You can purchase various implementation offers from RNIS in Tampa, Florida. See [Table 1, Customer-Accessible Resources](#), on page 10 for contact information.

RNIS does not handle technical support questions on Avaya Integrated Management installations from customers who do not purchase a contract.

Avaya Technical Service Organization (TSO)

The Avaya Technical Service Organization (TSO) provides support to the Avaya Integrated Management client teams, field technicians, and customers. The TSO will bill customers for support on a time and materials basis if the following conditions exist:

- Customers do not provide remote access.
- Customers do not have a current maintenance agreement.
- Customers do not procure and install the required systems and software as defined in the Integrated Management Services Support Plan.
- Customers request support that is outside the purchase agreement.

The TSO does not support hardware or software that customers purchase from third-party vendors.

Avaya Network Management Software Systems Support Group (NMSSS)

The Avaya Network Management Software Systems Support Group (NMSSS) in Tampa Bay, Florida answers customer calls about products in Avaya Integrated Management. NMSSS will either answer your questions directly or connect you with an associate who can answer questions about the products.

Customized Management Solutions for Avaya Integrated Management

The Integrated Management Product Team understands customer's needs and is focused on customer satisfaction. The Product Team will assist customers with Avaya Integrated Management projects and will provide:

- **Project Management** — An Integrated Management project person will work with the customer to access configuration and customization requirements for any or all applications within the Avaya Integrated Management suite. If custom work is required, the evaluation will include a proposed statement of work and price. Note that this offer is *not* intended to provide installation for customers that choose to implement Integrated Management applications using Avaya Services or third-party implementation services.
- **Training** — Basic training can be performed remotely using an interactive medium to display the applications and a conference bridge for audio. On-site training can be customized to meet the customer's needs. Customized training will focus on application functionality that is relevant to the customer and provide focused knowledge transfer to facilitate application-specific training.

Training and Project Management is available for the following Integrated Management applications:

- Avaya Site Administration
- Avaya Voice Announcement Manager
- Avaya Fault and Performance Manager/Proxy Agent
- Communication Manager Native SNMP Agent Alarms
- Avaya MultiSite Administration
- Avaya Voice Over IP Monitoring Manager
- Avaya Directory Enabled Management
- Avaya Terminal Configuration
- Avaya Network Management Console with VoIP System View

Avaya Contact Information

[Table 1](#) and [Table 2](#) provide contact information that you may use if you need assistance during the process of installing and setting up Avaya Integrated Management.

Table 1: Customer-Accessible Resources

Resource	Contact Information
Avaya Support Center	http://www.avaya.com/support
Network Management Software Systems Support (NMSSS)	+1 800 237-0016
Remote Network Integration Services (RNIS)	+1 800 730-9108, prompt 3 http://www1.avaya.com/enterprise/brochures/svc1369.pdf
Toll Fraud Intervention	+1 800 643-2353, prompt 1

Table 2: Avaya Internal Resources

Resource	Contact Information
Avaya System Management Support	http://aem-support.dr.avaya.com
Avaya Technology and Consulting (ATAC)	+1 888 297-4700, prompt 2,6 http://forum.avaya.com (requires a password)
Remote Network Integration Services (RNIS)	http://associate2.avaya.com/sales_market/products/data-implementation-services/
Integrated Management Services Support Plan	http://associate2.avaya.com/solution/support_plans/#Enterprise
AIM001 Form	http://associate2.avaya.com/sales_market/products/data-implementation-services Click Avaya Integrated Management Configuration Request Form #1.

Product Documentation

The installation, configuration, and getting started books; user guides; and release notes for this release of all Avaya Integrated Management products are available on the Avaya Integrated Management Home Page. The configuration books provide tasks that must be completed after the products are installed.

The latest version of Avaya Integrated Management product documentation, including this book, is available from the Avaya Support Web Site. To view or download these books from the Web, you must have access to the Internet, an Internet browser, and Adobe Acrobat Reader, version 5.0 or later. Adobe Acrobat Reader is provided on the Windows Server CD and is also available from <http://www.adobe.com>. See [How to Access Books on the Web](#) for instructions on how to view or download these books.

How to Access Books on the Web

To view or download books before the products are installed, follow these steps:

- 1 Access <http://www.avaya.com/support>.
- 2 In the left column, click **System and Network Management**.
- 3 Scroll to **Integrated Management**, locate the product name, and click the link corresponding to the software release to display a list of available books for that product.

To view or download books after the products are installed, follow these steps:

- 1 Use your Web browser to go to the Integrated Management Home Page.
- 2 In the left column, click **User Documents**.
- 3 At the User Documents page, scroll to the product name and click the book title.

Tell Us What You Think!

Let us know how this book measured up to your expectations. Your opinions are crucial to helping us meet your needs! Send us your comments by mail, fax, or e-mail as follows:

Mail Avaya Inc.
 Avaya Integrated Management Documentation Team
 Room 3C-313
 307 Middletown Lincroft Rd.
 Lincroft, NJ 07738
 USA

Fax: Avaya Integrated Management Documentation Team
 + 1 732 852-2469

E-mail: document@avaya.com
Subject: Avaya Integrated Management Documentation Team

2 Overview

Enhanced Converged Management

Enhanced Converged Management is a Windows solution for Avaya Integrated Management. It is designed for small-to-medium size networks that run Windows platforms. It provides a complete converged solution that helps you manage your network through a common web-based user interface. The System View provides the ability to see your whole voice system structure and hierarchy. With this offer, you can administer Avaya voice systems, Avaya network switches, and IP endpoints; monitor the quality of data transmissions over the network; and set up and manage the rules for quality of service parameters. The Enhanced offer is for multiple Avaya Communication Managers and provides five user licenses for Avaya Communication Manager administration. A full version of Avaya VoIP Monitoring Manager is provided.

Enhanced Converged Management is provided on the following two CDs:

- Windows Server CD
- Windows Client CD

Integrated Management Products

The Integrated Management products provided in the Enhanced Converged Management offer are listed in [Table 3](#).

Table 3: Products in Enhanced Converged Management

Product Name	Windows Server	Windows Client
Avaya Network Management Console with System View ¹	✓	
Avaya Site Administration		✓ ²
Avaya Voice Announcement Manager		✓ ²
Avaya Device Managers	✓	
Avaya Network Configuration Manager	✓	
Avaya Software Update Manager	✓	
Avaya Address Manager	✓	
Avaya VLAN Manager	✓	
Avaya QoS Manager	✓	
Avaya VoIP Monitoring Manager	✓	✓ ³
Avaya SMON™ Manager ⁴	✓	
Network Management System Integration (NMSI)	N/A ⁵	

- 1 The Console with System View is not available when HP OpenView is installed on the Windows server.
- 2 Enhanced offer provides five user licenses for Avaya Communication Manager administration.
- 3 The Windows Client CD for the Enhanced offer contains both the VoIP Monitoring Manager 90-day trial version and the VoIP Monitoring Manager client component. You should install the client component only if the server component is installed on the Windows server.
- 4 SMON Manager 90-day trial version. Customers can purchase a license key to fully activate the SMON Manager beyond the 90-day trial period.
- 5 NMSI for Windows is only available in the Advanced Converged Management offer. This CD is shipped in both the Advanced Converged Management and Enhanced Converged Management offers. For the Enhanced offer, skip this option.

Avaya SMON Manager License Key

Customers have the option of purchasing the SMON Manager license key. This key is required to fully activate the SMON Manager beyond the 90-day trial period. The license key is available as an add-on option for the Enterprise Converged Management, Enhanced Converged Management, and Advanced Converged Management offers.

HP OpenView Integration

For the Enhanced Converged Management offer, the Network Management applications can integrate with HP OpenView on the Windows server. HP OpenView must be installed on the server *before* the Network Management applications are installed.

HP OpenView is not included in any of the Integrated Management offers. Customers must purchase and maintain HP OpenView separately. Avaya Services does not support HP OpenView or other third party products.

Pre-Installation Tasks

Before installing Avaya Integrated Management products, you must complete the following pre-installation tasks.

- 1 Check the minimum hardware and software requirements for the following:
 - Windows server (see [Windows Server Requirements](#) on page 18).
 - Windows client PC (see [Windows Client PC Requirements](#) on page 25).
- 2 Check that all previous sequential upgrades and/or major releases were installed before installing this release. If the wizard detects a software upgrade that is not sequential, the wizard will stop and display a message to install the skipped releases. The wizard will then abort the installation.
- 3 Carefully review *Avaya Integrated Management Implementation Guidelines*, document number 555-233-163. This document is available from the Avaya Support Web Site. (See [How to Access Books on the Web](#) on page 11.) This document describes server configuration requirements and provides pre-installation forms that must be completed before you begin installing the Avaya Integrated Management products. The pre-installation forms contain information that you will need to install the products, such as IP addresses, server domain names, and port addresses.
- 4 **HP OpenView (Optional).** If you plan to run HP OpenView, you must install HP OpenView on the Windows server **before** you install the Network Management applications. When HP OpenView is present, the Network Management Console with System View is not available, and HP OpenView acts as the launch point for the applications and device managers.

NOTE:

HP OpenView is not included in any of the Integrated Management offers. Customers must purchase and maintain HP OpenView separately. Avaya Services does not support HP OpenView or other third party products.

- 5 Carefully review this entire book before you start the installations on the servers and client PCs.

3 Windows Server Installation

Windows Server CD

The Windows Server CD contains the following Integrated Management products:

- Network Management System Integration (NMSI) for Windows (integrates Avaya Fault and Performance Manager with HP OpenView). (For the Advanced offer only; for the Enhanced offer, skip this option.)
- Avaya VoIP Monitoring Manager
- Network Management applications:
 - Avaya Network Management Console with System View
 - Avaya Network Configuration Manager
 - Avaya Software Update Manager
 - Avaya SMON Manager (90-day trial) – Customers can purchase the license key to activate the SMON Manager beyond the 90-day trial.
 - Avaya Address Manager
 - Avaya VLAN Manager
 - Avaya QoS Manager
- Avaya Device Managers

The Windows Server CD also contains the following components:

- Avaya Integrated Management Home Page
- Java Runtime Environment
- Adobe Acrobat Reader (required to view documents)

Windows Server Requirements

[Table 4](#) provides the minimum requirements for the Windows server.

Table 4: Windows Server Requirements

Component	Recommended	Comments
Operating system	Microsoft Windows 2003 Standard Edition or Enterprise Edition server.	Microsoft Windows 2000 server is supported.
Processor	1.3 GHz Pentium® 4	1.3 GHz Pentium 3 is acceptable. A maximum of two processors is supported.
Hard Drive	40 GB	
Memory	1.5 GB RAM	
Network Connectivity	TCP/IP 100 Mbit Network Card	
Modem	56K modem for remote access	
CD-ROM Drive	Required	Needed for installation.
Extra Software	Anti-virus software pcAnywhere	Required for Avaya support. pcAnywhere is needed for remote access by Avaya Services.
Web Browser	Internet Explorer 6.0	Needed for access to the Integrated Management Home Page and web-based clients.
Network Management System	HP OpenView 7.0.1 for Windows	Optional. HP OpenView 6.4 for Windows is also supported. HP OpenView is not included on the Windows server CD. Customers must purchase, install, and maintain HP OpenView. Avaya Services does not support HP OpenView in any Integrated Management offer.
Java Runtime Environment	1.4.2	Needed to support web-based applets and Java applications. JRE is included on the Windows Server CD.

Installing the Windows Server Products

The procedure to install or to upgrade the Avaya Integrated Management products on the Windows server is generally the same. If an earlier release of an Integrated Management product on the Windows Server CD is already installed on the server, you are given the option to uninstall it prior to installing the current release.

- 1** Ask all users to log off the system.
- 2** Close all open windows and applications.
- 3** Insert the **Avaya Integrated Management 2.1, Windows Server** CD into the CD-ROM drive.
The Avaya Integrated Management Windows Server window appears. It provides the main menu.

NOTE:

Install Acrobat Reader if it is not already installed on the computer.

- 4** Perform one of the following steps:
 - If this is a new installation of Integrated Management, go to [Step 5](#).
 - If this is an upgrade installation, you must uninstall the previous release of Integrated Management applications and Java Runtime Environment. Do the following:
 - a** Click **Install Server Products** and follow the prompts to uninstall the previous release of Integrated Management applications.
 - b** After the Integrated Management applications are uninstalled, reboot the computer. After the computer reboots, the Avaya Integrated Management Windows Server window appears. It provides the main menu.
 - c** Click **Install Java Runtime Environment** from the main menu. The Program Maintenance dialog box appears.
 - d** Select **Remove**, and then click the **Next** button. After Java Runtime Environment is removed, the Avaya Integrated Management Windows Server window appears. It provides the main menu.
 - e** Continue with [Step 14](#).
- 5** Click **Install Apache**.
The Welcome dialog box appears.

NOTE:

Apache must be installed in order to install the Server Products.

- 6** Click the **Next** button.
The Apache License Agreement dialog box appears.
- 7** Read the license agreement. To accept the license agreement, select **I accept the terms of the license agreement**, and then click the **Next** button.
The Choose Destination Location dialog box appears. By default, the files will be installed in **c:\Program Files\Avaya**.

8 Perform one of the following steps:

- To install the files in the default folder, click the **Next** button.
- To change the folder where the files will be installed, click the **Change** button, specify the folder you want to use, and then click the **Next** button.

The Apache HTTP Server Information dialog box appears.

9 Enter the following information:

- In the **Network** field, enter the network name.
- In the **Server** field, enter the server IP address.
- In the **Administrator's e-mail** field, enter the e-mail address of the administrator. This allows the system to notify the administrator if problems occur during the Apache installation.

10 Click the **Next** button.

A dialog box appears stating that you need to disable IIS to continue the installation.

11 Click the **Yes** button to disable IIS.

The Ready to Install the Program dialog box appears.

12 Click the **Install** button.

The installation status bar appears. When Apache 2 is installed, the InstallShield Wizard Complete dialog box appears.

13 Click the **Finish** button.

The Avaya Integrated Management Windows Server window appears. It provides the main menu.

14 Click **Install Java Runtime Environment**.

The Java 2 Runtime Environment License Agreement dialog box appears.

15 Read the license agreement. To accept the license agreement, select **I accept the terms in the license agreement**, click the **Next** button.

The Setup Type dialog box appears. By default, **Typical** is selected.

16 Click the **Next** button.

After Java Runtime Environment is installed, the Install Shield Wizard Complete dialog box appears.

17 Click the **Finish** button.

The Avaya Integrated Management Windows Server window appears. It provides the main menu.

18 Click **Install Server Products**.

The Welcome dialog box appears.

19 Click the **Next** button.

The Information dialog box appears.

20 Click the **Next** button.

The Avaya License Types dialog box appears.

- 21** Read the license types. To accept the license types, click the **Yes** button.

NOTE:

You must accept the terms of the license types in order to continue with the installation.

The Choose Destination Location dialog box appears. By default, the files will be installed in **c:\Program Files\Avaya**.

- 22** Perform one of the following steps:

- To install the files in the default folder, click the **Next** button.
- To change the folder where the files will be installed, click the **Change** button, specify the folder you want to use, and then click the **Next** button.

The Select Features dialog box appears. This dialog box displays the applications and components you can install.

NOTE:

Required Components, Network Management, and Home Page are grayed out. This indicates that the wizard automatically installs these components. They cannot be deselected.

- 23** Make sure the applications you want to install are selected. Perform the following steps:

- a** Click **Device Managers** and then click the **Change** button. The Select Subfeatures dialog box appears. By default, all Device Managers are selected.
- b** If you do not want to install a Device Manager, click the check box to deselect it, and then click the **Continue** button.

The Select Features dialog box appears.

- 24** Click the **NMSI** check box to deselect it. NMSI is not part of the Enhanced offer.

- 25** Click the **Next** button.

The Enter Network Management Server IP Address dialog box appears.

- 26** Enter the IP address of the Network Management server, and click the **Next** button.

The Enter VoIP Monitoring Manager Server IP Address dialog box appears.

- 27** Enter the IP address of the VoIP Monitoring Manager server, and click the **Next** button.

The Enter VoIP Monitoring Manager Server Port dialog box appears.

- 28** Enter the number of the RTCP Listen Port, and click the **Next** button.

The Database Installation dialog box appears. By default, VMM Integrated MSDE Database is selected.

NOTE:

If you want to use a different SQL database, deselect VMM Integrated MSDE Database.

- 29** Click the **Next** button.

The Database Login Information dialog box appears.

- 30** Enter your login, password, and password confirmation, and click the **Next** button.

The Integrated Management Home Page Server IP Address dialog box appears.

NOTE:

You can click the **Next** button to skip the dialog boxes requesting IP addresses for applications you are not installing.

- 31** Enter the IP address of the Integrated Management Home Page server, and click the **Next** button.

The Avaya MultiSite Administration Server IP Address dialog box appears.

- 32** Click the **Next** button to skip the dialog boxes requesting IP addresses for Avaya MultiSite Administration, Avaya Fault and Performance Manager, Avaya Proxy Agent, Avaya Integrated Management Database, Avaya Converged Communication, Avaya SCCAN, and Avaya Message Networking. These products are not provided in this offer.

The Setup Summary dialog box appears. It lists the applications that you selected to install.

- 33** Click the **Next** button.

The installation status bar appears. When the installation is complete:

- If you selected VMM Integrated MSDE Database (as described in [Step 28](#) and [Step 29](#)), a message appears instructing you to reboot the computer and then install MSDE from the Windows Server CD main menu. Go to [Step 34](#).
- If you did not select VMM Integrated MSDE Database, the InstallShield Wizard Complete dialog box appears. By default, **Yes, I want to restart my computer now** is selected. Go to [Step 42](#).

- 34** Click the **OK** button. The InstallShield Wizard Complete dialog box appears. By default, **Yes, I want to restart my computer now** is selected.

- 35** Remove the CD from the drive, and then click the **Finish** button to restart the Windows server.

- 36** When the Windows server is restarted, re-insert the **Avaya Integrated Management 2.1, Windows Server** CD into the CD-ROM drive.

The Avaya Integrated Management Windows Server window appears. It provides the main menu.

- 37** Click **Install MSDE**.

The Welcome dialog box appears.

- 38** Click the **Next** button.

A message appears stating MSDE database will be installed on Windows with mixed mode security.

- 39** Click the **OK** button.

The Ready to Install the Program dialog box appears.

- 40** Click the **Install** button.

The MSDE Service Pack Installation Steps dialog box appears.

- 41** Perform the steps provided to download the latest service pack for MSDE. This download is required for new installations only. When the download is complete, click the **Next** button.

After MSDE is installed, one of the following occurs:

- The InstallShield Wizard Complete dialog box appears. Go to [Step 42](#).
- If VoIP Monitoring Manager was installed and the SNMP service is not installed on the server, the Insert Disk dialog box appears. Perform the following steps:
 - a** Remove the Windows Server CD from the CD-ROM drive.
 - b** Insert the Microsoft Windows Operating System CD into the CD-ROM drive, and click the **OK** button.
 - c** Follow the installation wizard prompts.

NOTE:

When prompted to install the SNMP service, you must configure a community name with write-access. VoIP Monitoring Manager will attempt to initially connect using the community name, **private**. For security reasons, it is recommended that a different community name be chosen.

When completed, the Installation Wizard Complete dialog box appears.

- d** Remove the Microsoft Windows Operating System CD from the CD-ROM drive.
 - e** On the InstallShield Wizard Complete dialog box for Integrated Management, click the **Finish** button to restart the Windows server. Go to [Step 43](#).
- 42** Remove the CD from the drive, and then click the **Finish** button to restart the Windows server.
- 43** Refer to the Avaya Integrated Management Home Page for documentation on the applications you installed. Also, the latest versions of these books are available on the Avaya Support Web Site. See [How to Access Books on the Web](#) on page 11. The documents are in PDF format. To view a PDF, you must install Adobe Acrobat Reader on your computer. Adobe Acrobat Reader is provided on the Windows Server CD.

NOTE:

Regularly check the Avaya Support Web Site for software updates.

4 Windows Client Installation

Windows Client CD

The Windows Client CD contains products that you install directly onto the PCs. After the Windows server installation is completed (see [Chapter 3, “Windows Server Installation”](#)), you can also download and install the same products provided on this CD from the Avaya Integrated Management Home Page.

The Windows Client CD contains the following Integrated Management products:

- Avaya Site Administration
- Avaya Voice Announcement Manager
- Avaya VoIP Monitoring Manager (90-day trial)
- Avaya VoIP Monitoring Manager (client) – This option is available **only** for the Enhanced Converged Management and Advanced Converged Management offers.

The Windows Client CD also contains the following components:

- Java Runtime Environment
- Adobe Acrobat Reader (required to view documents)

Windows Client PC Requirements

[Table 5](#) provides the requirements for the Windows client PC.

Table 5: Windows Client PC Requirements

Component	Recommended	Comments
Operating system	Microsoft Windows 2000, Windows XP Professional, or Windows 2003	
Processor	600 MHz Pentium®	
Hard Drive	1 GB	Required to install all of the client components.
Memory	256 MB RAM	
Monitor	SVGA	Required for Avaya support.
Network Connectivity	TCP/IP 10/100 Network Card	
Modem	56K Modem	Optional. May be needed for remote access to the client PC.
CD-ROM Drive	Required	Needed for installation.
Web Browser	Internet Explorer 6.0	Required to access the Integrated Management Home Page and web-based clients.

Installing the Windows Client Products

The procedure to install or upgrade the contents of the **Windows Client CD** is generally the same.

- 1** Close all open windows and applications.
- 2** Insert the **Avaya Integrated Management 2.1, Windows Client** CD into the CD-ROM drive.
The Avaya Integrated Management Windows Client window appears. It provides a main menu.

NOTE:

Install Acrobat Reader if it is not already installed on the computer.

- 3** Click **Install Java Runtime Environment**.
The Java 2 Runtime Environment License Agreement dialog box appears.
- 4** Read the license agreement. To accept the license agreement, select **I accept the terms in the license agreement**, click the **Next** button.
The Setup Type dialog box appears. By default, **Typical** is selected.
- 5** Click the **Next** button.
After Java Runtime Environment is installed, the Install Shield Wizard Complete dialog box appears.
- 6** Click the **Finish** button.
The Avaya Integrated Management Windows Client window appears. It provides the main menu.
- 7** Click **Install Client Products**.
The Welcome dialog box appears.
- 8** Click the **Next** button.
The Avaya License Types dialog box appears.
- 9** Read the license types. If you accept the license types, click the **I accept the terms of the license agreement** option button, and then click the **Next** button.

NOTE:

You cannot install the Avaya Integrated Management products unless you accept the license types.

The Choose Destination Location dialog box appears. By default, the applications will be installed in **c:\Program Files\Avaya**.

- 10** Perform one of the following steps:
 - To install the applications in the default folder, click the **Next** button.
 - To change the folder where the applications will be installed, click the **Change** button, specify the folder you want to use, and then click the **Next** button.

The Select Features dialog box appears. This dialog box displays the applications and components you can install.

NOTE:

You can install VoIP Monitoring Manager Client if the VoIP Monitoring Manager server components are installed on the Windows server.

- 11** Make sure the applications you want to install are selected, and then click the **Next** button.
- 12** Perform one of the following steps:
 - If you are installing the VoIP Monitoring Manager, the Enter VoIP Monitoring Manager Server IP Address dialog box appears. Go to [Step 13](#).
 - If you are not installing the VoIP Monitoring Manager, the Enter Avaya Integrated Management Server IP Address dialog box appears. Go to [Step 15](#).
- 13** Enter the IP address of the VoIP Monitoring Manager server, and then click the **Next** button.
 - If you are installing VoIP Monitoring Manager Trial, the Enter VoIP Monitoring Manager Server Port dialog box appears. Go to [Step 14](#).
 - If you are installing VoIP Monitoring Manager Client, the Avaya Integrated Management Server IP Address dialog box appears. Go to [Step 15](#).
- 14** Enter the number of the RTCP Listen Port, and then click the **Next** button.

The Enter Avaya Integrated Management Server IP Address dialog box appears.
- 15** In the Enter Avaya Integrated Management Server IP Address dialog box, enter the IP address of the Avaya Integrated Management Home Page server, and then click the **Next** button.

The Start Copying Files dialog box appears.
- 16** Click the **Next** button.

The Setup Status message box appears showing the status of the installation. When the installation is complete, the InstallShield Wizard Complete dialog box appears.
- 17** Remove the CD from the drive, and then click the **Finish** button to restart the Windows client.
- 18** If you are installing Avaya VoIP Monitoring Manager (trial) on a PC that does not have Windows SNMP Service running, a request for the Windows Operating System CD will appear at the end of the installation. Finish this installation and then install the SNMP Service from the Windows Operating System CD.

NOTE:

When prompted to install the SNMP service, you must configure a community name with write-access. VoIP Monitoring Manager will attempt to initially connect using the community name, **private**. For security reasons, it is recommended that a different community name be chosen.

You can access the products by selecting **Start > Programs > Avaya**. For more information about an Avaya Integrated Management product, access the online help after you start the application.

NOTE:

Regularly check the Avaya Support Web Site for software updates.

5 Avaya Mailbox Manager

About Mailbox Manager

Mailbox Manager for the Avaya S3400 Message server is a Windows interface for performing moves, adds, and changes on the Message Storage Server (MSS) component. The software maintains an off-line database of your subscriber and class of service data. You make your changes to subscribers and classes of service in this interface, and it sends the changes to your MSS.

For more information about Avaya Mailbox Manager, see the following books:

- Getting Started Guide
- User Guide

These books are available from the User Documents page, which is on the Avaya Integrated Management Home Page.

Launching Mailbox Manager

The Avaya Mailbox Manager option is available from the Launch Products page, which is on the Avaya Integrated Management Home Page. In order to launch Mailbox Manager from the Launch Products page, you must:

- Install Avaya Site Administration and/or Avaya Voice Announcement Manager which are provided on the Windows Client CD. (See [Chapter 4, “Windows Client Installation”](#).) The installation of at least one of these products automatically installs the components required to launch the Mailbox Manager from the Avaya Integrated Management Home Page.
- Install Avaya Mailbox Manager on your PC. Installation software for Mailbox Manager is included on the Avaya Modular Messaging Installation CD that comes with the Avaya S3400. Follow the single-user instructions provided in the *Mailbox Manager Getting Started Guide*.
- Complete the licensing procedure as described in “[Licensing Mailbox Manager](#).”

Licensing Mailbox Manager

When you install Avaya Mailbox Manager, a single-user license is created. If your organization also manages other Avaya legacy message servers that are supported by Mailbox Manager (for example, Octel 250/350, Octel 200/300, or Intuity AUDIX) you may already have Mailbox Manager licenses for those as well. You can combine the licenses for these systems into one license and manage them from one interface if you upgrade those licenses to Mailbox Manager 5.0.

NOTE:

If you plan to use Mailbox Manager to manage your Messaging Services system along with Octel 250/350, Octel 200/300, or Intuity AUDIX system, then you cannot run Mailbox Manager from the Messaging Application software.

To get a combined license for all of your Avaya message servers, do the following:

- 1** Install Mailbox Manager for your Avaya S3400 by following the single-user instructions provided in the *Mailbox Manager Getting Started Guide*.
- 2** Locate your license file **C:\MBMData\Config\Config.2nl**.
- 3** Send an e-mail to **license@unimax.com** requesting the license. You will need to include a copy of your license file and identifying numbers for your legacy systems, as follows:
 - Octel 200/300 with system software 2.0 or newer — system serial number and current system software version.
 - Octel 250/350 with system software 2.0 or newer — system serial number (also known as VPMOD serial number) and current system software version.
 - Intuity AUDIX with system software 4.4 or newer — system serial number, current system software version, and model type. (MAP 40 and MAP 100 were sold with bundled licenses. MAP 5 is supported by Mailbox Manager but did not include a license.)

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